

IN THE CLAIMS:

1. (Currently Amended) A system comprising ~~means for~~configured to execute~~executing~~ application sessions in an electronic device with one or more processors, and ~~means for to~~schedule~~scheduling~~ Rresource Rreservation Iinstances as well as ~~the execution of to~~execute substantially simultaneous application sessions, wherein ~~the an~~ application session to be executed comprises one or more Aactivity Bblock in one or more Aactivity Bblock Ccontainers, and an execution order is specified for said Aactivity Bblocks; the system further comprising resource type specific Rresource Hhandlers for reserving resources for the application session, Rresource Aallocation Mmanager for analysing and saving the resource allocation situation, Aapplication Ssession Mmanagement and Sscheduling meansmanager for selecting at least the next application session and Aactivity Bblock to be executed on the basis of said resource allocation situation, said system configured to execute~~executing~~ ~~means for executing~~ the next Aactivity Bblock in the course of the selected application session, and the system is provided with a protocol connecting the Rresource Hhandlers, Rresource Aallocation Mmanager, Aapplication Ssession Mmanagement and Sscheduling manager ~~means and executing means~~, to control the execution order and to implement the transfer of information between said Rresource Hhandlers, Rresource Aallocation Mmanager, Aapplication Ssession Mmanagement and Sscheduling meansmanager, ~~and executing means~~ the system further comprising an operating system with scheduling functions, and for synchronizing the reservation, release and other resource-related control from the application session management and scheduling manager, activity block containers, resource allocation manager, and resource handlers, there is a session control protocol comprised of application-independent control messages and rules on use thereof, which is arranged during operation to implement the synchronization and scheduling control of the execution of the application session management and scheduling manager, the activity block containers, the resource allocation manager, as well as the resource handlers, based on task switching functions of the operating system as well as OS task priorities of the operating system defined for the application session management and scheduling manager, the activity block containers, the resource allocation manager, and the resource handlers.

2. (Currently Amended) The system in accordance with Claim 1, ~~comprising~~ meansconfigured for bookkeeping of the resource allocation situation, ~~meansconfigured~~ for

transmitting a first control message to an Aactivity Bblock to provide control information on the resource allocation to the Aactivity Bblock at the time of the initiation of the Aactivity Bblock, and ~~means~~for transmitting a second control message at the time of the completion of the execution of the Aactivity Bblock to provide information about the resources reserved or released by the Aactivity Bblock to update the bookkeeping of the resource allocation situation after the completion of each Aactivity Bblock.

3. (Currently Amended) The system according to Claim 2, ~~comprising means~~configured for an application session to reserve the resources needed by each Aactivity Bblock, as well as to release them, either directly from the resource type specific Rresource Hhandlers or from the Rresource Aallocation Mmanager that enable the queuing of reservation request messages, on the basis of control parameters received in a first control message received from Aapplication Ssession Mmanagement and Sscheduling meansmanager.

4. (Currently Amended) The system in accordance with Claim 2, ~~comprising means~~configured for making the Rresource Rreservation Iinstances created on a request from the application session, via the use of second Ccontrol messages, dynamically available to different Aactivity Bblock Ccontainers involved in the execution of the session, as needed.

5. (Cancelled)

6. (Currently Amended) The system in accordance with the Claim 1, comprising a Rresource Iinstance Ftable per each Rresource Hhandler to provide the resource allocation situation to said resource allocation management and allocation means, and the synchronization of the Rresource Aallocation Mmanager with respect to the Rresource Hhandlers is arranged to be determined so that substantially immediately after each execution turn of the Rresource Hhandlers it is the turn of the Rresource Aallocation Mmanager, wherein the resource allocation situation is unambiguously known in the Rresource Iinstance Ftables regarding the ~~latest~~most lately occurring changes ~~occurred~~.

7. (Currently Amended) The system in accordance with Claim 6, wherein the synchronization of the Rresource Aallocation Mmanager with respect to the Aapplication Ssession Mmanagement and Sscheduling meansmanager is determined so that substantially immediately after each execution turn of the Rresource Aallocation Mmanager it is the turn of the

Application Session Management and Sscheduling meansmanager, wherein the resource allocation situation is unambiguously known regarding the latest changes to have occurred, and values can be determined by the Application Session Management and Sscheduling meansmanager for the parameters of the control messages generated by it for the synchronization of the use of various types of Resource Reservation Instances.

8. (Currently Amended) The system in accordance with the Claim 1, wherein an End State Module is placed at the end of each Activity Bblock to complete the execution of the block, and a Waiting State Module is placed in the Activity Bblock Container holding the Activity Bblock, and that the execution control of the Activity Bblock Container holding the Activity Bblock is arranged to generate a second Control message in the End State Module and to pause the execution in the Waiting State Module in order to wait for a first control message from the Application Session Management and Sscheduling meansmanager, wherein the execution of the application session is temporarily interrupted regarding the current Activity Bblock Container.

9. (Currently Amended) The system in accordance with Claim 8, wherein the Application Session Management and Sscheduling meansmanager are arranged to analyse the resource allocation situation and the scheduling of the sessions to be executed to detect an overload condition of one or more resources and to manage it by replacing, as needed, application sessions with other application sessions requiring less resources, or by delaying, as needed, the transmission of first control messages to the application sessions, which results in a temporary suspension of the ongoing application session or in a delayed initiation of a new application session.

10. (Currently Amended) The system in accordance with the Claim 1, wherein the Activity Bblocks of the application session are placed in one or more Activity Bblock Containers, that Activity Bblocks in any one of these Activity Bblock Containers are arranged to be executed temporally at different times, and in the presence of Activity Bblocks that are intended to be executed substantially at the same time in the course of the session, they are placed in different Activity Bblock Containers.

11. (Currently Amended) The system in accordance with Claim 10, wherein for designing applications that are to be executed in the system, each Activity Bblock Container is

furnished with an interface module at those points where the execution of an Aactivity Bblock Ccontainer can be interrupted and it may be the turn of another OSoperating system task to be executed, thus enabling the sending and reception of Ssession Ccontrol Pprotocol messages to take place via this interface of the Aactivity Bblock Ccontainer without a need to deal with these messages of the protocol as part of the application design work.

12. (Currently Amended) The system in accordance with the Claim 1, wherein the Rresource Hhandlers are equipped with an interface for transmitting information between each Rresource Hhandler and the system, this interface being substantially independent of the application session and the resource type.

13. (Currently Amended) The system in accordance with the Claim 1, comprising a dedicated Rresource Iinstance Ttable in the use of each Rresource Hhandler, and the Rresource Hhandlers are designed to be without intermediate delayed states, wherein the changes of the status data of individual Rresource Rreservation Iinstances are stored in the Rresource Iinstance Ttable of each Rresource Hhandler.

14. (Currently Amended) The system in accordance with the Claim 1, wherein the Aapplication Ssession Mmanagement and Sscheduling meansmanager ~~are is~~ is associated with a Ssession Hhistory Ttable and the Rresource Aallocation Mmanager ~~are is~~ is associated with a Rresource Aallocation Ttable, and the Aapplication Ssession Mmanagement and Sscheduling means manager and the Rresource Aallocation Mmanager are designed to be without intermediate states, wherein ~~the~~ changes of session-related status information is stored in said Ssession Hhistory Ttable, and ~~the~~ changes of session-related information of Rresource Rreservation Iinstances are stored in said Rresource Aallocation Ttable.

15. (Currently Amended) The system in accordance with the Claim 1, ~~comprising means~~ ASMconfigured to determine ~~the a~~ a load condition of ~~theat least one~~ at least one processor of ~~said one or more processors~~ and to adjust the power consumption of the at least one processor on the basis of the load condition through ~~the~~ scheduling of ~~the~~ activities of the application sessions.

16. (Currently Amended) A method for executing application sessions in an electronic device with one or more processors for synchronizing Rresource Rreservation Iinstances as well as

the execution of substantially simultaneous application sessions, wherein the application session to be executed comprises one or more Aactivity Bblocks in one or more Aactivity Bblock Ccontainers, and an execution order is determined for said Aactivity Bblocks, the method comprising at least the following steps:

- a-resource management and allocation-step for requesting and reserving resources for the application session,
- a-bookkeeping and analysis-step for saving and analysing the resource reservation situation,
- a-scheduling and selection-step for selecting the next application session and Aactivity Bblock to be executed at least on the basis of said resource reservation situation,
- ~~an execution step for executing the next Aactivity Bblock in the course of the selected application session,~~

wherein in the method, a communication protocol connecting said resource management and allocation-step, bookkeeping and analysis-step, scheduling and selection-step, and the ~~executing step~~ are used to control the execution order and, if necessary, to transfer information between said resource management and allocation-step, bookkeeping and analysis-step, scheduling and selection-step, and ~~executing step~~

wherein in the method, an operating system is utilized comprising task switching functions, and that for synchronizing the reservation, release and other resource-related control from the application session management and scheduling manager, activity block containers, resource allocation manager and the resource handlers, there is a session control protocol comprised of application-independent control messages and rules on use thereof, which is arranged, during operation, to implement synchronization and scheduling control of the execution of the application session management and scheduling manager, the activity block containers, the resource allocation manager, as well as the resource handlers, on the basis of the task switching functions of the operating system as well as the task priorities of the operating system defined for the application session management and scheduling manager, the activity block containers, the resource allocation manager, and the resource handlers.

17. (Currently Amended) The method in accordance with Claim 16, wherein a bookkeeping of the resource allocation is maintained, and a first control message is transmitted to an Aactivity Bblock to provide control information on the resource allocation at the time of the initiation of the Aactivity Bblock, and a second Ccontrol message is returned by the Aactivity

Bblock to provide information about the resources reserved or released by the Aactivity  
Bblock to update the bookkeeping of the resource allocation situation after the completion of  
each Aactivity Bblock.

18. (Currently Amended) The method in accordance with Claim 17, wherein the resources  
needed by each Aactivity Bblock are reserved and released by the application session, either  
directly from resource type specific Rresource Hhandlers or from the Rresource Aallocation  
Manager that enable the queuing of Rreservation Rrequest messages, on the basis of control  
parameters received in a first control message received from Aapplication Session  
Management and Sscheduling-means manager.

19. (Currently Amended) The method in accordance with Claim 17, wherein second control  
messages are used by the application session to dynamically assign Rresource Rreservation  
Instances to the use of different Aactivity Bblock Containers involved in the execution of  
the session, as needed.

20. (Cancelled)

21. (Currently Amended) The method in accordance with the Claim 16, wherein in the  
method, a Rresource Instance Table is used per each Rresource Handler to provide the  
resource allocation situation to said Rresource Aallocation Manager, and the  
synchronization of the bookkeeping and analysis-step with respect to the resource  
management and allocation-step of the Rresource Hhandlers is determined so that  
substantially immediately after each execution turn of the Rresource Hhandlers, it is the turn  
of the bookkeeping and analysis-step, wherein the resource allocation situation is  
unambiguously known in the Rresource Instance Tables regarding-the changes that have  
occurred.

22. (Currently Amended) The method in accordance with Claim 21, wherein-the scheduling  
of the scheduling and selection-step with respect to the bookkeeping and analysis-step is  
determined so that the scheduling and selection-step is in turn substantially immediately after  
the execution of the bookkeeping and analysis-step, wherein the resource allocation situation  
is unambiguously known in the Rresource Aallocation Table regarding the latest changes  
occurred, and values can be determined by the Aapplication Session Management and

S~~s~~cheduling-means manager for the parameters of the control messages generated by it for the synchronization of the use of various types of R~~r~~esource R~~r~~eservation I~~n~~stances.

23. (Currently Amended) The method in accordance with the Claim 16, wherein an E~~end S~~s~~tate M~~m~~odule is placed at the end of each A~~a~~ctivity B~~b~~lock to complete the execution of the block, and a W~~w~~aiting S~~s~~tate M~~m~~odule is placed in the A~~a~~ctivity B~~b~~lock C~~c~~ontainer holding the A~~a~~ctivity B~~b~~lock, and the execution control of the A~~a~~ctivity B~~b~~lock C~~c~~ontainer holding the A~~a~~ctivity B~~b~~lock generates a second control message in the E~~end S~~s~~tate M~~m~~odule and pauses the execution in the W~~w~~aiting S~~s~~tate M~~m~~odule in order to wait for an first control message from the A~~a~~pplication S~~s~~ession M~~m~~anagement and S~~s~~cheduling-means manager, wherein the execution of the application session is temporarily interrupted regarding the current A~~a~~ctivity B~~b~~lock C~~c~~ontainer.~~~~

24. (Currently Amended) The method in accordance with Claim 23, wherein the A~~a~~pplication S~~s~~ession M~~m~~anagement and S~~s~~cheduling-means manager analyzezes the resource allocation situation and the scheduling of the sessions to be executed to detect an overload condition of one or more resources and to manage it by replacing, as needed, application sessions with other application sessions requiring less resources, or by delaying, as needed, the transmission of first control messages to the application sessions, which results in a temporary suspension of the ongoing application session, or in a delayed initiation of a new application session.

25. (Currently Amended) The method in accordance with the Claim 16, wherein the A~~a~~ctivity B~~b~~locks of the application session are placed in one or more A~~a~~ctivity B~~b~~lock C~~c~~ontainers, A~~a~~ctivity B~~b~~locks in any one of these A~~a~~ctivity B~~b~~lock C~~c~~ontainers are executed temporally at different times, and in the presence of A~~a~~ctivity B~~b~~locks that are intended to be executed substantially at the same time in the course of the session, they are placed in different A~~a~~ctivity B~~b~~lock C~~c~~ontainers.

26. (Currently Amended) The method in accordance with Claim 25, wherein for designing applications that are to be executed in the system, each A~~a~~ctivity B~~b~~lock C~~c~~ontainer is furnished with an interface module at those points where the execution of an A~~a~~ctivity B~~b~~lock or A~~a~~ctivity B~~b~~lock C~~c~~ontainer can be interrupted and it may be the turn of another O~~o~~perating S~~s~~ystem task to be executed, thus enabling the sending and reception of S~~s~~ession

Econtrol Pprotocol messages to take place via this interface of the Aactivity Bblock Container without a need to deal with these messages of the Ssession Econtrol Pprotocol as part of the application design work.

27. (Currently Amended) The method in accordance with Claim 16, wherein the Rresource Handlers are equipped with an interface for transmitting information between each Rresource Handler of the system, this interface being substantially independent of the application session and the resource type.

28. (Currently Amended) The method in accordance with Claim 16, wherein a dedicated Rresource Instance Table is in the use of each Rresource Handler, and the Rresource Handlers are designed to be without intermediate delayed states, wherein the changes of the status data of individual Rresource Reservation Instances are stored in the Rresource Instance Table of each Rresource Handler.

29. (Currently Amended) The method in accordance with Claim 16, wherein a Ssession History Table is in the use of the scheduling and selection-step, and a Rresource Allocation Table is in the use of the bookkeeping and analysis-step, the resource management and allocation-step, bookkeeping and analysis-step, as well as scheduling and selection-step are designed to be without intermediate delayed states, wherein the changes of session-related status information is stored in said Ssession History Table, and the changes of session-related information of the Rresource Reservation Instances are stored in said Rresource Allocation Table.

30. (Currently Amended) The method in accordance with Claim 16, wherein ~~the~~ a load condition of the processor is determined, and ~~the~~ power consumption of the processor is adjusted based ~~on the basis of~~ the load condition through the scheduling of the activities of the application sessions.

31. (Currently Amended) An electronic device comprising ~~means for executing one or more~~ processors configured to execute application sessions, ~~one or more processors~~, and ~~means for scheduling~~ configured to schedule Rresource Reservation Instances as well as the execution of substantially simultaneous application sessions, wherein the application session to be executed comprises one or more Aactivity Bblocks in one or more Aactivity Bblock



~~C~~ontainers, and an execution order is determined for said ~~A~~activity ~~B~~blocks; the electronic device further comprising resource type specific ~~R~~resource ~~H~~handlers for reserving resources for the application session, ~~R~~resource ~~A~~allocation ~~M~~anager for ~~analysing~~analyzing and saving a resource allocation situation, ~~A~~application ~~S~~session ~~M~~anagement and ~~S~~scheduling ~~means manager~~ for selecting at least the next application session and ~~A~~activity ~~B~~block to be executed based on the basis of said resource allocation situation, ~~executing means and~~ for executing ~~the a~~ next ~~A~~activity ~~B~~block in the course of the selected application session; and the electronic device is provided with a protocol connecting the ~~R~~resource ~~H~~handlers, ~~R~~resource ~~A~~allocation ~~M~~anager, ~~A~~application ~~S~~session ~~M~~anagement and ~~S~~scheduling ~~means manager~~ ~~and executing means~~, to control the execution order and to implement the transfer of information between said ~~R~~resource ~~H~~handlers, ~~R~~resource ~~A~~allocation ~~M~~anager, ~~A~~application ~~S~~session ~~M~~anagement and ~~S~~scheduling ~~means manager~~, ~~and executing means~~ the electronic device further comprising  
an operating system with scheduling functions, and for synchronizing reservation, release and other resource-related control from the application session management and scheduling manager, activity block containers, resource allocation manager, and resource handlers, wherein there is a session control protocol provided comprising of application-independent control messages and rules on use thereof, that is arranged during its operation to implement synchronization and scheduling control of execution of the application session management and scheduling manager, the activity block containers, the resource allocation manager, as well as the resource handlers, on the basis of the task switching functions of the operating system as well as the OS Operating System task priorities defined for the application session management and scheduling means manager, the activity block containers, the resource allocation manager, and the resource handlers.

32. (Currently Amended) ~~An A~~ A wireless communication device comprising one or more processors configured to execute means for executing application sessions, ~~one or more processors, and means for scheduling and~~ configured to schedule ~~R~~resource ~~R~~reservation ~~i~~nstances as well as the execution of substantially simultaneous application sessions, wherein ~~the an~~ application session to be executed comprises one or more ~~A~~activity ~~B~~blocks in one or more ~~A~~activity ~~B~~block ~~C~~ontainers, and an execution order is determined for said ~~A~~activity ~~B~~blocks; the wireless communication device further comprising resource type specific ~~R~~resource ~~H~~handlers for reserving resources for the application session, ~~R~~resource ~~A~~allocation ~~M~~anager for ~~analyzing~~sing and saving a resource allocation situation,

Application Session Management and Sscheduling ~~means~~ Manager for selecting at least the a next application session and Aactivity Bblock to be executed based on the ~~basis of~~ said resource allocation situation, ~~executing means~~ and for executing the next Aactivity Bblock in the course of the selected application session; and the electronic device is provided with a protocol connecting the Rresource Hhandlers, Rresource Aallocation Manager, Application Session Management and Sscheduling ~~means~~ manager ~~and executing means~~, to control the execution order and to implement the transfer of information between said Rresource Hhandlers, Rresource Aallocation Manager, Application Session Management and Sscheduling ~~means~~ manager, ~~and executing means~~ the wireless communication device further comprising an operating system with scheduling functions, and for synchronizing reservation, release and other resource-related control from the application session management and scheduling manager, activity block containers, resource allocation manager, and resource handlers, and comprising a session control protocol comprised of application-independent control messages and rules on their use, which is arranged during operation to implement the synchronization and scheduling control of execution of the application session management and scheduling manager, the activity block containers, the resource allocation manager, as well as the resource handlers, based on the task switching functions of the operating system as well as the operating system task priorities defined for the application session management and scheduling manager, the activity block containers, the resource allocation manager, and the resource handlers.

33. (Currently Amended) A computer readable medium having a computer~~software~~ program stored thereon comprising machine executable ~~steps~~instructions for executing application sessions in an electronic device with one or more processors for synchronizing Rresource Rreservation Instances as well as the execution of substantially simultaneous application sessions, wherein the application session to be executed comprises one or more Aactivity Bblocks in one or more Aactivity Bblock Ccontainers, and an execution order is determined for said Aactivity Bblocks, the computer~~software~~ program further comprising machine executable instructions~~steps~~ for performing at least the following ~~steps~~:

- ~~a resource management and allocation step for requesting and reserving resources for the application session,~~

- ~~a bookkeeping and analysis step for saving and analyzing~~ the resource reservation situation,
- ~~a scheduling and selection step for selecting the next application session and A~~activity Bblock to be executed at least on the basis of said resource reservation situation,
- ~~an execution step for executing the next A~~activity Bblock in the course of the selected application session,

wherein the ~~computer software~~ program also comprises machine executable ~~instructions~~steps for using a communication protocol connecting said ~~requesting and reserving resources for the application session~~resource management and allocation step, ~~saving and analyzing the resource reservation situation~~bookkeeping and analysis step, ~~selecting the next application session and activity block to be executed~~scheduling and selection step, and ~~executing the next activity blocks~~, the execution step to control the execution order and, if necessary, to transfer information between said resource management and allocation step, ~~bookkeeping and analysis step, scheduling and selection step, and execution step~~

wherein the computer program is configured to utilize an operating system comprising task switching functions, and that for synchronizing reservation, release and other resource-related control from an application session management and scheduling manager, activity block containers, resource allocation manager and the resource handlers, there is provided a session control protocol comprised of application-independent control messages and rules on use thereof, which is arranged, during operation, to implement synchronization and scheduling control of execution of the application session management and scheduling manager, the activity block containers, the resource allocation manager, as well as the resource handlers, based on the task switching functions of the operating system as well as operating system task priorities defined for the application session management and scheduling manager, the activity block containers, the resource allocation manager, and the resource handlers.

34. (New) An electronic device comprising means for executing application sessions, one or more processors, and means for scheduling resource reservation instances as well as the execution of substantially simultaneous application sessions, wherein the application session to be executed comprises one or more activity blocks in one or more activity block containers, and an execution order is determined for said activity blocks; the electronic device further comprising resource type specific resource handlers for reserving resources for the application session, resource allocation manager for analyzing and saving a resource

allocation situation, application session management and scheduling means for selecting at least the next application session and activity block to be executed on the basis of said resource allocation situation, executing means for executing the next activity block in the course of the selected application session; and the electronic device is provided with a protocol connecting the resource handlers, resource allocation manager, application session management and scheduling means and executing means, to control the execution order and to implement the transfer of information between said resource handlers, resource allocation manager, application session management and scheduling means, and executing means.

the electronic device further comprising

an operating system with scheduling functions, and for synchronizing the reservation, release and other resource-related control from the application session management and scheduling means, activity block containers, resource allocation manager, and resource handlers, there is a session control protocol composed of application-independent control messages and rules on use thereof, that is arranged during its operation to implement synchronization and scheduling control of execution of the application session management and scheduling means, the activity block containers, the resource allocation manager, as well as the resource handlers, on the basis of the task switching functions of the operating system as well as the operating system task priorities defined for the application session management and scheduling means, the activity block containers, the resource allocation manager, and the resource handlers.